

**ABSTRACT OF THE DISCLOSURE**

A scrambling method for generating recording data onto a disc includes vertically scrambling main data, which is stored in DRAM, to generate PO, wherein the scrambled data due to generate PO is not stored in DRAM; then scrambling data again to generate PI; the scrambled data due to generating PI adds with ID, IED, RSV, EDC, PI, and PO, arranging in orders and recording onto a disc.